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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,758	11/01/1999	JOSEPH G. MURPHY	07072-919001	9176

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EMC CORPORATION
OFFICE OF THE GENERAL COUNSEL
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EXAMINER

VAUGHN JR, WILLIAM C

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 07/08/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

27

Office Action Summary

Application No.

09/431,758

Applicant(s)

MURPHY ET AL.

Examiner

William C. Vaughn, Jr.

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This Action is in response to the Amendment and Response received 14 April 2003.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 April 2003 has been entered.

3. The application has been examined. **Claims 1-20** are pending. The objections and rejections cited are as stated below:

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-20** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, 5, 6, 10, 13-15, 17, 18 and 20 recites the limitation "the operation status". There is insufficient antecedent basis for this limitation in the claim. In each of these claims the Examiner will interpret "the operation status" to mean "an operation status".

Claims 3, 7 and 19 recites the limitation "the current status". There is insufficient antecedent basis for this limitation in the claim. The Examiner will interpret "the current status", to mean "a current status".

Art Unit: 2142

Claim 7 recites the limitation "the operation". There is insufficient antecedent basis for this limitation in the claim. The Examiner will interpret "the operation", to mean "operation".

Claim 16 recites the limitation "the configuration". There is insufficient antecedent basis for this limitation in the claim. The Examiner will interpret "the configuration" to mean "a configuration".

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-7, 10-12 and 16-20** are rejected under 35 U.S.C. 102(e) as being anticipated by Axberg et al. (Axberg), U.S. Patent No. 6,253,240.

8. Axberg discloses *a network architecture for the management of one or more of a plurality of storage devices* (Axberg teaches a system the management of networks of digital data storage devices), [see Axberg, Col.1, lines 23-25 and Col. 2, lines 65-66] *comprising: a storage system including a plurality of storage devices* (Axberg teaches a storage network that includes multiple storage devices attached to multiple host computer system), [see Axberg, Col. 2, lines 54-67]; *a plurality of host computers* [see Axberg, Col. 2, lines 65-67], *each host computer including at least one agent for transmitting data to and retrieving data* (Axberg teaches a manager that can be located within one of the host computer systems or another

Art Unit: 2142

separate system not directly coupled to the storage network, that allows for agents to gather data and communicates with the manager across a communications path which is independent of the storage network), [see Axberg, Col. 3, lines 5-7] *from one or more of the plurality of storage devices* [see Axberg, Col. 3, lines 10-12]; *one or more clients* (Axberg teaches that an agent may serve as a client), [see Axberg, Col. 14, lines 10-28] *one or more storage management servers* (Axberg teaches a host system that functions as the storage network manager), [see Axberg, Col. 7, lines 1-2] *in communication with, at least one agent, the one or more clients and the plurality of storage devices* (Axberg teaches that a local agent provides information to a manager in response to a command from the manager. The agent has different modes of operations such as an agent that is a server and manager acting as a client), [see Axberg, Col. 14, lines 30-40, Figure 1, items 110 and 120-129], *the one or more storage management servers providing information received from an agent and relating to the operation status of the storage devices to the one or more clients via an object-oriented dynamic linking mechanism so that the one or more clients can manage one or more storage devices of the plurality of storage devices* (Axberg teaches that the agent portion of the storage management program performs data gathering and monitoring functions. Axberg further teaches that the agent portion can poll the hosts and I/O controllers to determine the topology of a storage network as well as monitor and report error conditions. Axberg also teaches that the local agent provides data to the manager and performs certain tasks at its request. The client manager communicates with the local library utilizing remote procedure call facilities. The storage management program central manager is implemented utilizing object oriented programming code. Axberg further teaches that the client serving again as the manager creates connection objects that are linked to particular objects. Which allow a

Art Unit: 2142

client acting as a manager to communicate as well as manager a storage network), [see Axberg, Figure 8B, Col. 3, lines 2-9, Col. 8, lines 18-30, Col. 9, lines 50-67, Col. 10, lines 1-10, Col. 30, lines 40-45, Col. 36, lines 5-22, Col. 37, lines 3-20].

9. Regarding **claim 2**, Axberg discloses *wherein the storage management server includes: a poller for gathering the information relating to the operation status of the storage device* (Axberg teaches that within the memory area is an agent portion of the storage management program that performs data gathering and monitoring functions by polling hosts and I/O controllers in order to determine the existing topology of the storage network), [see Axberg, Col. 8, lines 24-30]; *and a central repository for storing the information relating to the operation status of said one of the storage devices* (Axberg teaches that information is contained in logical format in a central repository), [see Axberg, Col. 3, lines 62-64]; *and an object server for distributing the information relating to the operation status of the storage devices to the clients* (Axberg teaches utilizing storage management program that is implemented in an object-oriented programming code to manipulate object corresponding to events regarding configuration, device characteristics etc), [see Axberg column 9, lines 52-67, Col. 10, lines 1-18]. By this rationale **claim 2** is rejected.

10. Regarding **claim 3**, Axberg further discloses *wherein the poller polls each of the storage devices at predetermined intervals to maintain the current status of the operation of each of the storage devices* [see Axberg, Col. 19, lines 36-42]. By this rationale **claim 3** is rejected.

11. Regarding **claim 4**, Axberg further discloses *wherein the predetermined interval is less than or equal to one minute* [see Axberg, Col. 19, lines 36-42]. By this rationale **claim 4** is rejected.

Art Unit: 2142

12. Regarding **claim 5**, Axberg further discloses *wherein the storage management server further provides information relating to the operation status of storage connectivity devices which connect storage devices to the clients* (Axberg discloses storage management programs data gathering and monitoring function which can send a message to a Vdevice object causing its display to change in response to some event occurring on the network corresponding to providing information relating to operational status), [see Axberg, Col. 10, lines 1-10, 42-46 and Col. 11, lines 12-17]. By this rationale **claim 5** is rejected.

13. Regarding **claim 6**, Axberg further discloses *wherein the storage management server includes: a poller for gathering the information relating to the operation status of the storage device and storage connectivity devices* (Axberg teaches displaying the interconnecting relationships between different physical objects (storage device and storage connectivity), [see Axberg, Col. 9, lines 53-56 and Col. 11, lines 12-17]; *and a central repository* [see Axberg, Col. 3, lines 62-64] *for storing the information relating to the operation status of said one of the storage devices and storage connectivity devices* [see Axberg, Col. 8, lines 24-30] *and an object server for distributing the information relating to the operation status of the storage devices and storage connectivity devices to the clients* (Axberg teaches utilizing storage management program that is implemented in an object-oriented programming code to manipulate object corresponding to events regarding configuration, device characteristics etc), [see Axberg column 9, lines 52-67, Col. 10, lines 1-18].

14. Regarding **claim 7**, Axberg further disclose *wherein the poller polls each of the storage connectivity devices at predetermined intervals to maintain current status of the operation of*

Art Unit: 2142

each of the storage connectivity devices [see Axberg, Col. 11 lines 12-17, Col. 19, lines 36-67 and Col. 20, lines 24-33]. By this rationale **claim 7** is rejected.

15. Regarding **claim 10**, Axberg further discloses *wherein each of the clients includes a graphical user interface* [see Axberg Col. 27, line 25-36] *for displaying the information relating to the operation status* [see Axberg, Col. 9, lines 65-67 and Col. 10, line 1] *of the storage devices* [see Axberg Col. 28, lines 15-19]. By this rationale **claim 10** is rejected.

16. Regarding **claim 11**, Axberg further discloses *wherein the plurality of host computers is of different types* [see Axberg, Col. 8, lines 20-23]. By this rationale **claim 11** is rejected.

17. Regarding **claim 12**, Axberg further discloses *wherein the plurality of storage devices is of different types* [see Axberg, Col. 6, lines 53-60]. By this rationale **claim 12** is rejected.

18. **Claims 16-20**, lists all the same elements claims 1, 2, 3 and 5, but in method form rather than apparatus form. Therefore, the supporting rationale of the rejection to claims 1, 2, 3 and 5 applies equally as well to claims 16-20.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 8, 9, 13 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Axberg in view of Sitka, U.S. Patent No. 6,330,572.

Art Unit: 2142

21. Regarding **claim 8**, Axberg discloses the invention substantially as claimed. However, Axberg does not explicitly disclose a security component for limiting access by a client to one or more of the storage devices.

22. In the same field of endeavor, Sitka discloses (e.g., a system and method for managing storage of files within an hierarchical storage management (HSM) system). Sitka discloses *a security component for limiting access by a client to one or more of the storage devices* [see Sitka, Col. 3, lines 40-54].

23. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Sitka's teachings of a system and method for managing storage of files within an hierarchical storage management (HSM) system with the teachings of Axberg, for the purpose of improving overall economy of storage while maintaining workflow efficiency for each use. Thus, the system of Axberg provides motivation to combine the system, by stating the desire to support the construction and maintenance of storage networks with software that assists the user [see Axberg, Col. 2, lines 49-51]. By this rationale **claim 8** is rejected.

24. Regarding **claim 9**, Axberg-Sitka further discloses *wherein the storage management server includes a web server for communicating with the plurality of clients* [see Sitka, Col. 4, lines 36-50]. By this rationale **claim 9** is rejected.

25. Regarding **claim 13**, Axberg-Sitka further discloses *further comprising a plurality of storage management servers* [see Sitka, Figure 7, items 14 and 14b] *connected between the host computers* [see Axberg, Figure 3, item 331] *and the plurality of clients* [see Axberg, Figure 3, item 331], *each storage management server, providing information relating to the operation*

Art Unit: 2142

status of said one of the storage devices to at least one of the clients (Axberg teaches utilizing storage management program that is implemented in an object-oriented programming code to manipulate object corresponding to events regarding configuration, device characteristics etc), [see Axberg column 9, lines 52-67, Col. 10, lines 1-18]. By this rationale **claim 13** is rejected.

26. Regarding **claim 14**, Axberg-Sitka further discloses *wherein each of the storage management servers includes: a poller for gathering the information relating to the operation status of the storage device* (Axberg teaches that within the memory area is an agent portion of the storage management program that performs data gathering and monitoring functions by polling hosts and I/O controllers in order to determine the existing topology of the storage network), [see Axberg, Col. 8, lines 24-30]; *and a central repository for storing the information relating to the operation status of said one of the storage devices* (Axberg teaches that information is contained in logical format in a central repository), [see Axberg, Col. 3, lines 62-64]; *and an object server for distributing the information relating to the operation status of said one of the storage devices to at least one of the clients* (Axberg teaches utilizing storage management program that is implemented in an object-oriented programming code to manipulate object corresponding to events regarding configuration, device characteristics etc), [see Axberg column 9, lines 52-67, Col. 10, lines 1-18]. By this rationale **claim 14** is rejected.

Claim Rejections - 35 USC § 103

27. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Axberg-Sitka as applied to claims 8, 9, 13 and 14 above, and further in view of McChesney et al. (McChesney), U.S. Patent No. 5,854,102.

Art Unit: 2142

28. Regarding **claim 15**, Axberg-Sitka discloses the invention substantially as claimed.

However, Axberg-Sitka does not explicitly disclose a name server, connected to each of the plurality of storage management servers to determine which of the central repositories of the plurality of storage management servers includes the: information relating to the operation status of said one of the storage devices.

29. In the same field of endeavor, McChesney discloses (e.g., a system and method for performing administrative operations on object oriented applications operating in a distributed object programming environment). McChesney discloses *name server, connected to each of the plurality of storage management servers, to determine which of the central repositories of the plurality of storage management servers includes the information relating to the operation status of said one of the storage devices* [see McChesney, Col. 2, lines 9-12, Col. 5, 43-67 and Col. 6, lines 1-19].

30. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated McChesney teachings of a system and method for performing administrative operations on object oriented applications operating in a distributed object programming environment with the teachings of Axberg-Sitka, in order to provide a system and method for obtaining and manipulating configuration information about servers on computes in a distributed object programming environment as well as utilizing a naming server that resolves names provided by clients through the use of object references to a client [see McChesney, Col. 5, lines 51-67].

Response to Arguments

31. Applicant's arguments include the failure of previously applied art to expressly disclose management by one or more clients via an object-oriented dynamic linking mechanism so that the one or more clients can manage the one or more plurality of storage devices. See Response, Paper# 10, page 5, lines 1-3. It is evident from the detailed mappings found in the above rejection(s) that Axberg et al. disclosed this functionality [see Axberg, Figure 8B, Col. 3, lines 2-9, Col. 8, lines 18-30, Col. 9, lines 50-67, Col. 10, lines 1-10, Col. 30, lines 40-45, Col. 36, lines 5-22, Col. 37, lines 3-20]. Further, it is clear from the numerous teachings (previously and currently cited) that the provision for management by one or more clients via an object-oriented dynamic linking mechanism so that the one or more clients can manage the one or more plurality of storage devices, was widely implemented in the networking art. Thus, Applicant's arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive.

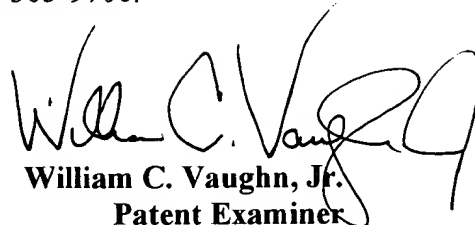
Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (703) 306-9129. The examiner can normally be reached on 8:00-5:00, 1st Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Powell can be reached on (703) 305-9703. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Art Unit: 2142

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.

A handwritten signature in black ink, appearing to read "William C. Vaughn, Jr.", with a stylized flourish at the end.

William C. Vaughn, Jr.
Patent Examiner
Art Unit 2142
June 30, 2003